

AMENDMENTS TO THE CLAIMS:

Please amend the claims, as indicated below. This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A signal processing method comprising:
 - receiving a first wireless communication signal, the first signal including pulse shaping distortion, ~~wherein the pulse shaping distortion is produced by pulse shaping;~~
 - ~~obtaining an approximation of the pulse shaping distortion;~~
 - extracting ~~[[the]]~~ an approximation of the pulse shaping distortion from the first signal to obtain a second signal; and
 - processing the second signal to obtain a user signal;
 - wherein extracting comprises applying an equalization between the second signal and a third signal corresponding to the first signal, the third signal including no pulse shaping distortion and consisting only of binary code division multiple access (CDMA) codes.
2. (Original) The method of claim 1, further comprising:
 - conducting a single-user detection; and
 - obtaining an amplitude estimate and a symbol delay for a user in a frame.
3. (Original) The method of claim 1, wherein the second signal has insignificant or no pulse shaping effects.

4. (Canceled)
5. (Currently Amended) The method of claim 1, wherein extracting ~~the~~
~~approximation of the pulse shaping distortion from the first signal~~ comprises
applying a decision feedback equalization between the second signal and an
approximation of ~~an original~~ the third signal ~~before pulse shaping~~ based on a
current decision.
6. (Currently Amended) The method of claim 1, wherein extracting ~~the~~
~~approximation of the pulse shaping distortion from the first signal~~ comprises
applying at least one order of perturbation to adjust the approximation of the
pulse shaping distortion.
7. (Currently Amended) The method of claim 1, wherein extracting ~~the~~
~~approximation of the pulse shaping distortion from the first signal~~ comprises:
applying at least one equalization; and
repetitively applying at least one order of perturbation to adjust the
approximation of the pulse shaping distortion.

8. (Currently Amended) The method of claim 1, wherein extracting ~~the~~
~~approximation of the pulse-shaping distortion from the first signal~~ comprises
subtracting an approximately known function of pulse shaping from an unknown
function of a time-varying channel function.
9. (Currently Amended) A signal processing method comprising:
receiving a first wireless communication signal, the first signal including
non-channel distortion, ~~wherein the non-channel distortion is~~
produced by a non-channel function;
~~obtaining an approximation of the non-channel distortion;~~
extracting ~~[[the]]~~ an approximation of the non-channel distortion from the
first signal to obtain a second signal that includes a time-varying
channel function; and
processing the second signal to obtain a user signal;
wherein extracting comprises applying an equalization between the
second signal and a third signal corresponding to the first signal,
the third signal including no non-channel distortion and consisting
only of binary code division multiple access (CDMA) codes.
10. (Previously Presented) The method of claim 9, wherein the non-channel function
comprises a transformation function.
11. (Previously Presented) The method of claim 9, further comprising:

conducting a single user detection; and
obtaining an amplitude estimate and a symbol delay for a user in a frame
to obtain the approximation of the non-channel distortion.

12. (Previously Presented) The method of claim 9, wherein the second signal has insignificant or no non-channel distortion.

13. (Canceled)

14. (Currently Amended) The method of claim 9, wherein extracting ~~the~~
~~approximation of the non-channel distortion from the first signal~~ comprises
applying a decision feedback equalization between the second signal and an
approximation of an original the third signal ~~before non-channel transformation~~
based on a current decision.

15. (Currently Amended) The method of claim 9, wherein extracting ~~the~~
~~approximation of the non-channel distortion from the first signal~~ comprises
applying at least one order of perturbation to adjust the approximation of the
non-channel distortion.

16. (Currently Amended) The method of claim 9, wherein extracting the ~~approximation of the non-channel distortion from the first signal~~ comprises subtracting an approximately known non-channel distortion from an unknown distortion of a time-varying channel function.
17. (Currently Amended) The method of claim 9, wherein extracting the ~~approximation of the non-channel distortion from the first signal~~ comprises:
applying at least one equalization; and
repetitively applying at least one order of perturbation to adjust the approximation of the non-channel function.
18. (Currently Amended) A signal processing system, comprising:
a receiver for receiving a first signal for wireless communication;
a tracking device for obtaining an amplitude estimate and a symbol delay for a user;
an approximating device, coupled to the tracking device, for providing an approximation of non-channel distortion in the first signal, wherein the non-channel distortion is produced by a non-channel function;
and
a signal-extracting device, coupled to the approximating device, for extracting the approximation of the non-channel distortion from the first signal to obtain a second signal that includes a time-varying channel function;

wherein extracting comprises applying an equalization between the
second signal and a third signal corresponding to the first signal,
the third signal including no non-channel distortion and consisting
only of binary code division multiple access (CDMA) codes.

19. (Previously Presented) The system of claim 18, wherein the non-channel function comprises a transformation function.
20. (Currently Amended) The system of claim 18, wherein extracting the ~~approximation of the non-channel distortion from the first signal~~ comprises at least one of the following process:
 - applying at least one equalization; and
 - applying at least one order of perturbation to adjust the approximation of the non-channel distortion.
21. (Cancelled)